Reference No. 124

# SERVICE BULLETIN

SUBJECT: INCREASED CHAIN ADJUSTMENT FOR NOSE LANDING GEAR RETRACTION MECHANISM (MOD N553)

1. Planning Information

A. Effectivity

(1) Aircraft Affected

All Nomad N22-Series and N24-Series aircraft whose log books do not already record the embodiment of Mod N553 or compliance with Service Bulletin NMD-32-15.

NOTE: Service Bulletin NMD-32-10 Revision 1 is to be incorporated prior to or concurrently with Service Bulletin NMD-32-15.

(2) Spares Affected

Nil.

B. Reason

To provide increased chain adjustment and clearance to the nose landing gear retraction mechanism.

C. Description

A new sprocket mounting bracket, packing strips and an angle are fitted on the top panel of the wheel well which allows greater adjustment of the nose landing gear chain drive. The upper chain guard in the centre console and a reinforcing angle in the wheel well on the underside of the lateral panel are reworked to give more clearance for the chain (Ref IPC 32-30-03 item 34).

D. Compliance

It is recommended that the operator comply with this Service Bulletin.

E. Approval

The modification detailed herein has been approved pursuant to Air Navigation Regulation 40 and conforms with the type certification requirements.

F. Manpower

11 manhours.

G. Material, Price and Availability

The parts required to incorporate the modification detailed in this Service Bulletin are available as Kit No. NMD-32-15-1 from the operator's local distributor. Distributors are to place a purchase order on GAF through the normal procurement procedure. Purchase orders are to quote the Aircraft Serial No. and Service Bulletin No. NMD-32-15. This kit will be available ex-factory from July, 1982 at $415.00 each. The price remains effective for 90 days from the date of this Bulletin.

H. Tooling Price and Availability

None required.

J. Weight and Balance

Negligible effect.

K. References

MM - Maintenance Manual.
IPC - Illustrated Parts Catalogue.

L. Publications Affected

IPC - Illustrated Parts Catalogue.

2. Accomplishment Instructions

A. Jack up the aircraft until the wheels are at least 2.5 inches clear of the ground.

B. Ensure that the landing gear circuit breakers are tripped (3-off) and that the BATTERY switch is at OFF.

C. Remove the Nose Gear Screw Actuator Chain Drive (Ref MM 32-30-12).

D. Remove the Sprocket Mounting Bracket and Angle (Ref Figure 1).

CAUTION: WHEN DRILLING OR REWORKING EXISTING PARTS EXERCISE CARE TO PREVENT INGRESS OF SWARF OR WASTE METAL INTO THE NOSE LANDING GEAR MECHANISM ADJACENT TO THE REWORK AREAS.

(1) Using a No.30 drill, drill out the eight rivets holding the idler sprocket bracket P/N 1A/N-10-762 or 2A/N-10-762 and the two packing strips P/N 1B/N-10-520 to the top panel of the wheel well. Discard the bracket and packing strips.

(2) Drill out the rivets attaching the angle P/N 1C/N-10-520 on the LH side of the slot in the panel on top of the wheel well forward of the lateral panel (Ref Fig 1). Discard the angle but retain the anchor nut that was attached to it.

(3) Inside the wheel well, rework the stiffening angle P/N 1C/N-10-514 attached to the underside of the lateral panel to the dimensions shown (Ref Fig 1, Section A-A). After reworking the stiffening angle, re-identify with new P/N 1B/N-03-715.

E. Fit Sprocket Mounting Bracket, Packing Strips and Angle.

(1) Locate the new angle P/N 1F/N-10-705 using the existing rivet holes in the top panel. Back drill the rivet holes in the angle, using a No.30 drill, from the holes in the top panel, deburr and rivet up the new angle using rivets P/N MS20470AD4-4.

(2) Locate the bracket P/N 3/N-10-762 and the packing strips P/N 2B/N-10-520 on the left hand side of the slot in the top panel of the wheel well forward of the lateral panel utilizing the existing rivet holes. Drill holes in the bracket and packing strips using No.30 drill. Deburr the rivet holes and then rivet the bracket and packing strips to the top panel using rivets P/N MS20470AD4-4.

(3) Rivet the anchor nut to the angle forward of the sprocket bracket, picking up the existing rivet holes through the angle and the panel using rivets P/N MS20426AD3-4.

F. Refit the Sprocket and Chain Drive (Ref MM 32-30-12).

G. Adjust the Chain Tension (Ref MM 32-30-12).

H. Synchronise the Nose Gear (Ref MM 32-30-12, Para 3A).

J. Rework the Upper Chain Guard P/N 1/N-40-296 (Ref Fig 2).

(1) Mark out the area of metal to be removed from the top surface of the upper chain guard (Ref Figure 2 detail A) and remove the metal within the shaded area.

(2) Position the cover plate over the cut out in the upper chain guard as shown in Figure 2 and, using the pre-drilled holes in the cover plate as a guide, drill ten 2.45 mm dia holes through the cover plate and upper chain guard.

(3) Deburr the rivet holes and rivet the cover plate to the upper chain guard using rivets P/N MS20470AD3-3.

(4) Open up the existing slots in the left hand side of the upper chain guard to the dimensions shown in Figure 2, detail B. After rework of chain guard re-identify with new P/N 1A/N-03-715.

K. After all drilling and reworking of existing parts is complete ensure that all swarf and waste metal has been removed from the rework area.

L. Fit Upper Chain Guard

(1) Position the chain guard over the chain and sprocket bracket and secure using screws removed on disassembly (Ref Para 2.C).

(2) Seal all gaps and around the joints with Silastic RTV 731 sealing compound to prevent the ingress of dust and moisture to the chain area.

(3) Retract and extend the landing gear. During operation of the system listen for unusual noises which may be caused by chain fittings hitting structure etc. If necessary adjust chain tension or clear obstructions (refer Maintenance Manual 32-30-12 for chain adjustment).

3. Materials Information

A. Parts Required per Aircraft

(1) Kit P/N NMD-32-15-1 is required for each aircraft.

(2) Each kit P/N NMD-32-15-1 comprises the following items:

| Item P/N | Title | Qty |
|---|---|---|
| 3/N-10-762 | Bracket, Sprocket Mounting | 1 |
| 2B/N-10-520 | Packing Strips | 2 |
| 1F/N-10-705 | Angle | 1 |
| 1C/N-40-949 | Cover Plate | 1 |

(3) The following items are to be obtained from the operator's stock or from local sources:

| Item P/N | Title | Qty |
|---|---|---|
| MS20470AD4-4 | Rivet | 18 |
| MS20470AD3-3 | Rivet | 10 |
| MS20426AD3-4 | Rivet | 2 |
| RTV731 | Silastic | A/R |

B. Parts Modified and Re-identified by the Operator

| New Item P/N | Title | Old P/N |
|---|---|---|
| 1A/N-03-715 | Chain Guard Upper | 1/N-40-296 |
| 1B/N-03-715 | Angle | 1C/N-10-514 |

C. Parts Required to Modify Spares

None.

D. Removed Parts

| | Item P/N | Title | Qty |
|---|---|---|---|
| | 1A/N-10-762 (Pre-Mod N43) | Bracket | 1 |
| OR | 2A/N-10-762 (Post Mod N43) | Bracket | 1 |
| | 1C/N-10-705 (Pre-Mod N7) | Angle | 1 |
| OR | 2C/N-10-705 (Post Mod N7) | Angle | 1 |

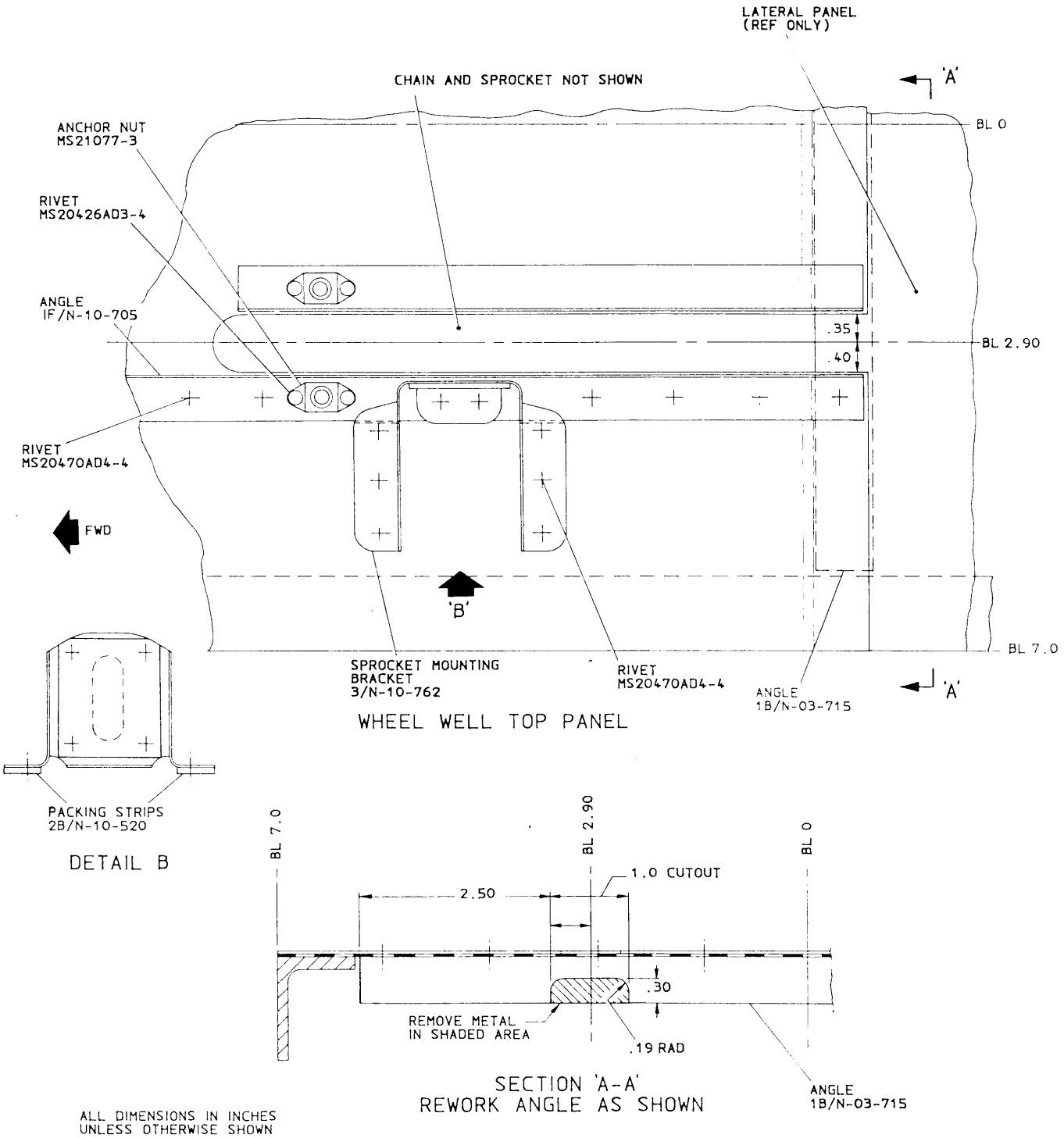
E. Special Tools and Equipment Required

None.

4. Recording Action

Record compliance with S/B NMD-32-15 in airframe log book.

12.60.002-1


LATERAL PANEL
(REF ONLY)
CHAIN AND SPROCKET NOT SHOWN
'A'
ANCHOR NUT
MS21077-3
BL 0
RIVET
MS20426AD3-4
ANGLE
1F/N-10-705
.35
.40
BL 2.90
RIVET
MS20470AD4-4
FWD
'B'
BL 7.0
SPROCKET MOUNTING
BRACKET
3/N-10-762
RIVET
MS20470AD4-4
ANGLE
1B/N-03-715
'A'
WHEEL WELL TOP PANEL
PACKING STRIPS
2B/N-10-520
DETAIL B
BL 7.0
BL 2.90
BL 0
1.0 CUTOUT
2.50
.30
REMOVE METAL
IN SHADED AREA
.19 RAD
SECTION 'A-A'
REWORK ANGLE AS SHOWN
ANGLE
1B/N-03-715
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE SHOWN

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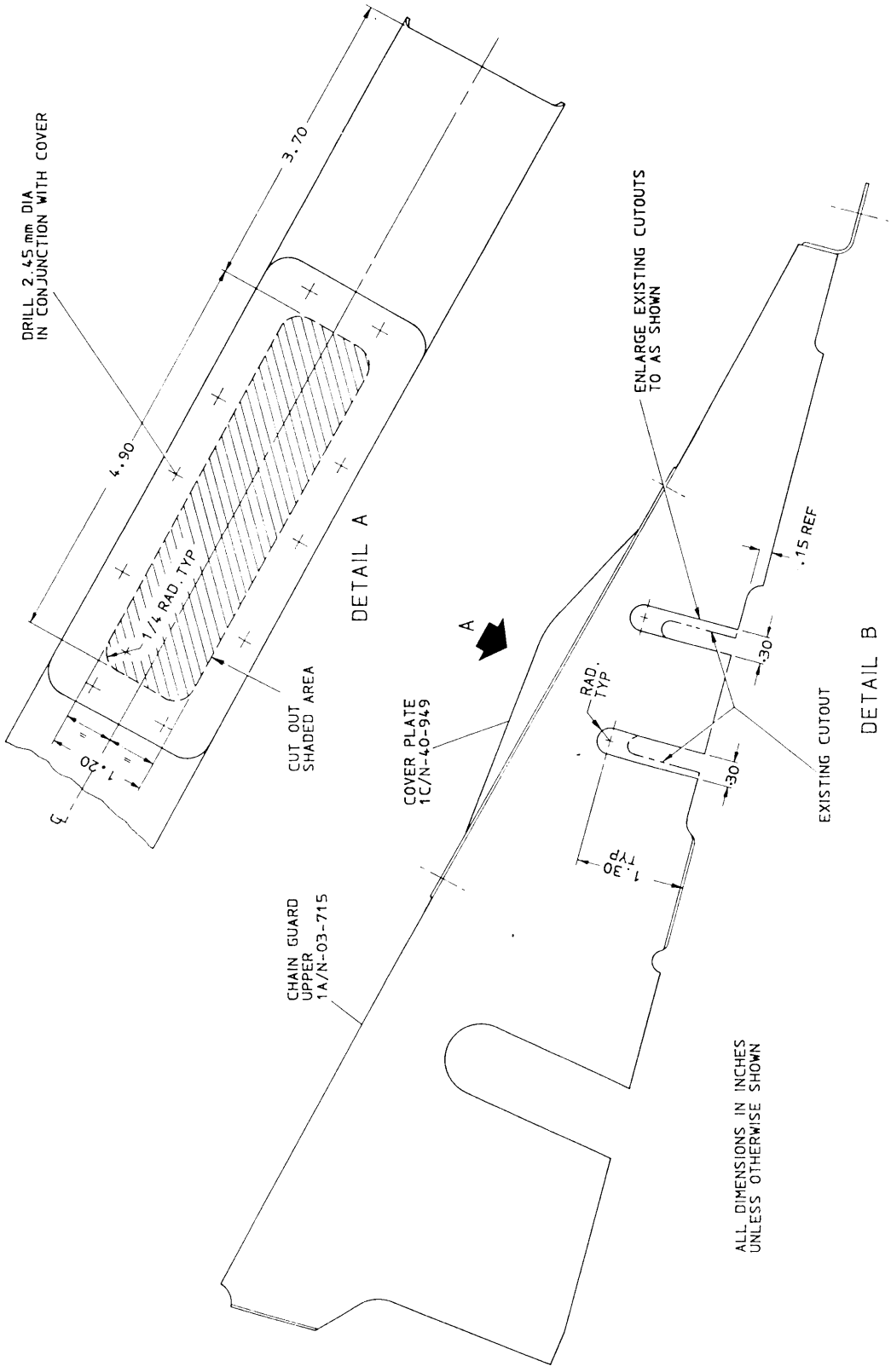




Rework to Upper Chain Guard
Figure 2